

ATTY. DOCKET NO.
30727.0013.CIP1SERIAL NO.
09/518,501LIST OF PATENTS AND OTHER ITEMS FOR APPLICANT'S
INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

APPLICANT:
METABASIS THERAPEUTICS, INC.FILING DATE:
March 5, 1999GROUP:
1614

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE
JK	AA	3,018,302	01.23.62	Bielefeld, et al.			
	AB	5,157,027	10/20 92	Biller, et al.			
	AC	5,658,889	8/19/97	Gruber, et al.			

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION	
							YES	NO
AM	AD	0 002 062 A	30.05.79	EP (Abstract)				
	AE	0 072 531 A	23.02.83	EP (Abstract)				
	AF	0 158 057 A	16.10.85	EP (Abstract)				
	AG	0 180 276	28.12.88	EP				
	AH	0 261 283	22.09.86	EP				
	AI	0 161 955 A	21.11.85	EPO				
	AJ	0 338 372 A	25.10.89	EPO				
	AK	0 353 692 A	07.02.90	EPO				
	AL	0 481 214 A	22.04.92	EPO				
	AM	492 738 A	30.06.70	CH				
	AN	16 93 219 A	17.09.70	DE (Abstract)				

EXAMINER:

DATE CONSIDERED:

EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant

ATTY. DOC. NO.
30727.0013.CIP1SERIAL NO.
09/518,501LIST OF PATENTS AND OTHER ITEMS FOR APPLICANT'S
INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

APPLICANT:
METABASIS THERAPEUTICS, INC.FILING DATE:
March 5, 1999GROUP:
1614

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIAL	DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION	
						YES	NO
AO	35 12 781 A1	10.04.85	DE (and English language U.S. Patent No. 4,952,740)				
AP	96/01267 A	18.01.96	WO				
AQ	97/03679 A	06.02.97	WO				
AR	98/09668 A	12.03.98	WO				
AS	98/39342	11.09.98	WO				
AT	98/39343	11.09.98	WO				
AU	98/39344	11.09.98	WO				

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

AV	"Patent Abstracts of Japan," Vol. 1998, No. 1, 30 January 1998 & JP 09 241284 A (Yamishata Koji; Nippon Soda Co. Ltd), 16 September 1997
AW	DeLombaert, et al., "N-Phosphonomethyl Dipeptides and Their Phosphonate Prodrugs, a New Generation of Neutral Endoproteptidase (NEP, EC 3.4.24.11) Inhibitors, <u>J. Med. Chem.</u> 37: 498-511 (1994)
AX	Edmunson, et al., "Cyclic Organophosphorus Compounds. Part 23. Configurational Assignments in the 4-Phenyl-1,3,2λ5-dioxaphosphorinane Series. X-Ray Molecular Structure of <i>cis</i> -2-Benzylamino-4-phenyl-1,3,2-dioxaphosphorinane 2-Oxide," <u>J. Chem. Res. Synop.</u> , 5: 122-123 (1989)
AY	Farquhar, et al., "5'-4-(Pivaloyloxy)-1, 3, 2-dioxaphosphorinane -2-yl]-2'-deoxy-5-fluorouridine: a membrane-permeating prodrug of 5-fluoro-2'-deoxyuridylic acid (FDUMP)" <u>J. Med. Chem.</u> 38:488-495 (1995)
AZ	Farquhar, et al., "Biologically Reversible Phosphate-Protective Groups," <u>J. Pharm. Sci.</u> 72(3): 324 (1983)

EXAMINER:

Examiner

DATE CONSIDERED:

EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant

LIST OF PATENTS AND OTHER ITEMS FOR APPLICANT'S
INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

APPLICANT:

METABASIS THERAPEUTICS, INC.

FILING DATE:

March 5, 1999

GROUP:

1614

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

BA	Farquhar, et al., "Synthesis and Biological Evaluation of 9-[5'-(2-Oxo-1,3,2-oxazaphosphorinan-2-yl)-β-D-arabinosyl]adenine and 9-[5'-(2-Oxo-1,3,2-dioxazaphosphorinan-2-yl)-β-D-arabinosyl]adenine: Potential Neutral Precursors of 9-[β-D-Arabinofuranosyl]adenine 5'-Monophosphate," <u>J. Med. Chem.</u> 28: 1358-1361 (1985)
BB	Farquhar, et al., "Synthesis and Biological Evaluation of Neutral Derivatives of 5-Fluoro-2'-deoxyuridine 5'-Phosphate," <u>J. Med. Chem.</u> 26: 1153-1158 (1983)
BC	Freed, et al., "Evidence For Acyloxymethyl Esters of Pyrimidine 5'-Deoxyribonucleotides as Extracellular Sources of Active 5'-Deoxyribonucleotides in Cultured Cells," <u>Biochem. Pharmac.</u> 38: 3193-3198 (1989)
BD	Hillers, et al., "Analogues of pyrimidine mono- and polynucleotides. IV. Phosphates of 1-(1,4-dihydroxy-2-pentyl)thymine and 1-(1,3-dihydroxy-2-propyl) uracil." <u>Khim Geterotski Soedin</u> 5:678-683 (1978). <u>Chem Abst.</u> v 89 no 17; abst no 146864a
BE	Hunston, et al., "Synthesis and Biological Properties of Some Cyclic Phosphotriesters Derived from 2'-Deoxy-5-fluorouridine," <u>J. Med. Chem.</u> 27: 440-444 (1984)
BF	Kryuchkov, et al., <u>Izv. Akad. Nauk SSSR, Ser. Khim.</u> 6: 1201-1248 (1987)
BG	Lok, et al., "Neurotoxicity associated with adenine arabinoside monophosphate in the treatment of chronic hepatitis B virus infection," <u>J. Antimicrob. Chemotherap.</u> 14: 93-99 (1984)
BH	Ludeman, et al., "Synthesis and Antitumor Activity of Cyclophosphamide Analogues. 4. Preparation, Kinetic Studies, and Anticancer Screening of "Phenyl ketophos phamide" and Similar Compounds Related to the Cyclophosphamide Metabolite Aldophosphamide," <u>J. Med Chem.</u> 29, 716-727 (1986)
BI	Meier, et al., "Cyclic Saligenyl Phosphotriesters of 2', 3'-Dideoxy-2', 3'-didehydrothymidine (d4T) - A New Pro-Nucleotide Approach," <u>Bioorg. Med. Chem. Lett.</u> 7: 99-104 (1977)
BJ	Meyer, et al., "2'-O'-Acyl-6-thioinosine Cyclic 3', 5'-Phosphates as Prodrugs of Thioinosinic Acid," <u>J. Med. Chem.</u> 22: 811-815 (1979)
BK	Neidlein, et al., "Mild Preparation of 1-Benzyloxyiminoalkylphosphonic Dichlorides: Application to the Synthesis of Cyclic Phosphonic Diesters and Cyclic Monoester Amides," <u>Heterocycles</u> 35: 1185-1203 (1993)

EXAMINER:

Examiner

DATE CONSIDERED:

EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant

LIST OF PATENTS AND OTHER ITEMS FOR APPLICANT'S
INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

APPLICANT:

METABASIS THERAPEUTICS, INC.

FILING DATE:

March 5, 1999

GROUP:

1614

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

BL	Nifant'ev, et al., "1,3,2, - Diazaphosphorinanes", <u>Zh. Obshch. Khim.</u> , Vol. 49, No. 1, 1979, Pages 64-74 (and English version as translated in corresponding English language publication)
BM	Nifant'ev, et al., "Synthesis and Structure of Some Stable Phospholane-Phospholanes," <u>Phos. Sulfur & Silicon</u> 113, 1-13 (1996)
BN	Predvoditelev D., et al., "Glycero-2-hydroxymethylene phosphates" <u>Journal of Organic Chemistry of the USSR</u> (English Translation 13:1489-1492 (1977))
BO	Predvoditelev, D. et al., "Synthesis of lipids and their models on the basis of glycerol alkylene phosphites. V. Cyclic phosphatidylglycerol and phosphatidylhydroxyhomocholine" <u>Journal of Organic Chemistry of the USSR</u> (English Translation 17:1156-1165 (1981))
BP	Shaw & Cundy, "Biological Screens of PMEA Prodrugs," <u>Pharm. Res.</u> 10 (Suppl) S24 (1993)
BQ	Shih, et al., "Preparation and Structures of 2-Dimethylamino-4-phenyl-1,3,2-dioxaphosphorinane-2-oxides," <u>Bull. Inst. Chem. Acad. Sin.</u> 41: 9-16 (1994)
BR	Starrett, et al., "Synthesis, Oral Bioavailability Determination, and <i>in Vitro</i> Evaluation of Prodrugs of the Antiviral Agent 9-[2-(Phosphonomethoxy)-ethyl]adenine (PMEA)," <u>J. Med. Chem.</u> 37: 1957-1864 (1994)
BS	Yamanaka, et al., "Metabolic Studies on BMS-200475, a New Antiviral Compound Active against Hepatitis B Virus," <u>Antimicrob. Agents Chemoth.</u> 43, 190-193 (1999)
BT	Zon, et al., "4 Cyclophosphamide Analogues," <u>Prog. Med. Chem.</u> 19: 205-246 (1982)

All duplicates

EXAMINER:

Examiner

DATE CONSIDERED:

EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant

Please type a plus sign (+) inside this box

FEB 25 2002

Approved for

PTO/SB/08A (08-00)
 10/31/2002 OMB 0851-0031
 DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

Substitute for form 1449A/PTO

Complete if Known

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 2

Application Number 09/318,501
 Filing Date March 3, 2000
 First Named Inventor Erlon
 Group Art Unit 1624
 Examiner Name T. McKenzie
 Attorney Docket Number 030727.0013.CIP1

RECEIVED
 TECH CENTER
 MAR 9 2002
 1600/2900

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ³
		Office ⁴	Number ⁴	Kind Code ² (if known)				

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ³
	AA	Coppi, et al., "Lewis Acid Mediated Condensation of Alkenols and Aldehydes. A Selective Synthesis of Tetrahydropyrans and Oxepanes," J. Org. Chem., Vol. 53, No. 4, 911-913 (1988)	
	AB	Lohr et al., "Targeted chemotherapy by intratumor injection of encapsulated cells engineered to produce CYP2B1, and ifosfamide activating cytochrome P450," Gene Therapy, 5, 1070-1078 (1988).	
	AC	Bijsterbosch, et al., "Disposition of the Acyclic Nucleoside Phosphonate (S)-9-(3-Hydroxy-2-Phosphonylmethoxypropyl)Adenine," Antimicrobial Agents and Chemotherapy, Vol. 42, p. 1146-1150 (May 1998).	
	AD	de Waziers, et al., "Cytochrome P 450 Isoenzymes, Epoxide Hydrolase and Glutathione Transferases in Rat and Human Hepatic and Extrahepatic Tissues1," The Journal of Pharmacology and Experimental Therapeutics, Vol. 253, No.1, p. 387-394 (1989).	

Examiner Signature

Date Considered

2/12/03

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation is not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box



PTO/SB/08A (08-00)
Approved for use through 10/31/2002. OMB 0851-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no person is required to respond to a collection of information unless it contains a valid OMB control number

Substitute for form 1449A/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	09/518,501
		Filing Date	March 5, 1999
		First Named Inventor	Erion
		Group Art Unit	1624
		Examiner Name	T. McKenzie
		Attorney Docket Number	030727.0013.CIP1
Sheet	2	of	2

RECEIVED
MAR 07 2002
TECH CENTER 1800/2800

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume/issue number(s), publisher, city and/or country where published.	1*
TH	AE	He, et al., "Inactivation of Cytochrome P450 3A4 by Bergamottin a Component of Grapefruit Juice," Chem. Res. Toxicol, Vol. 11, No. 4, p. 252-259 (1998).	
g	AF	Jounaidi et al., "Retroviral Transfer of Human Cytochrome P450 Genes for Oxazaphosphorine-based Cancer Gene Therapy," Cancer Research, Vol. 58, p. 4391- 4401 (Oct. 1, 1998).	

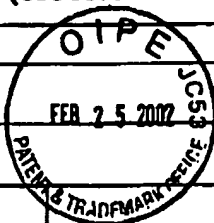
Examiner Signature	<i>[Signature]</i>	Date Considered	2/13/03
--------------------	--------------------	-----------------	---------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation is not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

FORM PTO-1449		ATTY. DOCKET NO. 30727.001	SERIAL NO. 09/518,501
LIST OF PATENTS AND OTHER ITEMS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)		APPLICANT: METABASIS THERAPEUTICS, INC.	
		FILING DATE: March 5, 1999	GROUP: 1



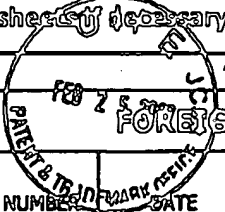
RECEIVED
MAR 07 2002
TECH CENTER

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE
TUM	AA	3,018,302	01/23/62	Bielefeld, et al.	260	461	—
TUM	AB	5,157,027	10/20/92	Biller, et al.	514	167	—
TUM	AC	5,658,889	8/19/97	Gruber, et al.	514	43	—

FOREIGN PATENT DOCUMENTS								
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB CLASS	TRANSLATION	
							YES	NO
TUM	AD	0 002 062 A1	30.05.79	EP (and English language Abstract)				
TUM	AE	0 072 531 A1	23.02.83	EP (and English language Abstract)				
TUM	AF	0 158 057 A	16.10.85	EP (U.K. English language translation)				
	AG	0 180 276 A1	28.12.88	EP				
	AH	0 261 283 A1	22.09.86	EP				
	AI	0 161 955 A1	21.11.85	EPO				
	AJ	0 338 372 A2	25.10.89	EPO				
	AK	0 353 692 A2	07.02.90	EPO				
	AL	0 481 214 B1	22.04.92	EPO				
	AM	492 738	30.06.70	CH (and English language Abstract)				
✓	AN	987,378	17.09.70	UK				

EXAMINER: <i>James M. Mc...</i>	DATE CONSIDERED: 2/8/02
EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant	

FORM PTO-1449 LIST OF PATENTS AND OTHER ITEMS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	ATTY. DOCKET NO. 30727.001	SERIAL NO. 09/518,501
	APPLICANT: METABASIS THERAPEUTICS, INC.	
	FILING DATE: March 5, 1999	GROUP: 1814

<div style="text-align: center;">  </div>							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	TRANSLATION YES	NO
<i>sm</i>	AO	35 12 781 A1	10.04.85	DE (and English language U.S. Patent No. 4,952,740)			
	AP	96/01267	18.01.96	WO			
	AQ	97/03679	06.02.97	WO			
	AR	98/09668	12.03.98	WO			
	AS	98/39342	11.09.98	WO			
	AT	98/39343	11.09.98	WO			
<i>V</i>	AU	98/39344	11.09.98	WO			

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)		
<i>sm</i>	AV	"Patent Abstracts of Japan," Vol. 1998, No. 1, 30 January 1998 & JP 09241284 A (Yamishata Koji, et al.; Nippon Soda Co. Ltd), 16 September 1997
	AW	DeLombaert, et al., "N-Phosphonomethyl Dipeptides and Their Phosphonate Prodrugs, a New Generation of Neutral Endoproteptidase (NEP, EC 3.4.24.11) Inhibitors, <u>J. Med. Chem.</u> 37: 498-511 (1994)
	AX	Edmunson, et al., "Cyclic Organophosphorus Compounds. Part 23. Configurational Assignments in the 4-Phenyl-1,3,2λ5-dioxaphosphorinane Series. X-Ray Molecular Structure of <i>cis</i> -2-Benzylamino-4-phenyl-1,3,2-dioxaphosphorinane 2-Oxide," <u>J. Chem. Res. Synop.</u> , 5: 122-123 (1989)
	AY	Farquhar, et al., "5'-4-(Pivaloyloxy)-1, 3, 2-dioxaphosphorin an -2-yl-2'-deoxy-5-fluorouridine: a membrane-permeating prodrug of 5-fluoro-2'-deoxyuridylic acid (FDUMP)" <u>J. Med. Chem.</u> 38:488-495 (1995)
<i>V</i>	AZ	Farquhar, et al., "Biologically Reversible Phosphate-Protective Groups," <u>J. Pharm. Sci.</u> 72(3): 324-325 (1983)

EXAMINER: Examiner <i>James M. Mc...</i>	DATE CONSIDERED: <i>7/9/02</i>
EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant	

LIST OF PATENTS AND OTHER ITEMS FOR APPLICANT'S
INFORMATION DISCLOSURE STATEMENT

(Use several sheets if necessary)

ATTY. DOCKET NO.

30727.001-IP1

SERIAL NO.

09/518,501

APPLICANT:

METABASIS THERAPEUTICS

FILING DATE:

March 5, 1999

GROUP:

1618

RECEIVED
MAR 07 2002
TECH CENTER 1600/2900

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)

BA	Farquhar, et al., "Synthesis and Biological Evaluation of 9-[5'-(2-Oxo-1,3,2-oxazaphosphorinan-2-yl)-β-D-arabinosyl]adenine and 9-[5'-(2-Oxo-1,3,2-dioxazaphosphorinan-2-yl)-β-D-arabinosyl]adenine: Potential Neutral Precursors of 9-[β-D-Arabinofuranosyl]adenine 5'-Monophosphate," <u>J. Med. Chem.</u> 28: 1358-1361 (1985)
BB	Farquhar, et al., "Synthesis and Biological Evaluation of Neutral Derivatives of 5-Fluoro-2'-deoxyuridine 5'-Phosphate," <u>J. Med. Chem.</u> 26: 1153-1158 (1983)
BC	Freed, et al., "Evidence For Acyloxymethyl Esters of Pyrimidine 5'-Deoxyribonucleotides as Extracellular Sources of Active 5'-Deoxyribonucleotides in Cultured Cells," <u>Biochem. Pharmac.</u> 38: 3193-3198 (1989)
BD	Hillers, et al., "Analogues of pyrimidinemono- and polynucleotides. IV. Phosphates of 1-(1,4-dihydroxy-2-pentyl)thymine and 1-(1,3-dihydroxy-2-propyl) uracil." <u>Khim Geterotski Soedin</u> 5:678-683 (1978). <u>Chem Abst.</u> v 89 no 17; abst no 146864d u.
BE	Hunston, et al., "Synthesis and Biological Properties of Some Cyclic Phosphotriesters Derived from 2'-Deoxy-5-fluorouridine," <u>J. Med. Chem.</u> 27: 440-444 (1984)
BF	Kryuchkov, et al., <u>Izv. Akad. Nauk SSSR, Ser. Khim.</u> 6: 1201-1248 (1987)
BG	Lok, et al., "Neurotoxicity associated with adenine arabinoside monophosphate in the treatment of chronic hepatitis B virus infection," <u>J. Antimicrob. Chemotherap.</u> 14: 93-99 (1984)
BH	Ludeman, et al., "Synthesis and Antitumor Activity of Cyclophosphamide Analogues. 4. Preparation, Kinetic Studies, and Anticancer Screening of "Phenyl ketophosphamide" and Similar Compounds Related to the Cyclophosphamide Metabolite Aldophosphamide," <u>J. Med. Chem.</u> 29, 716-727 (1986)
BI	Meier, et al., "Cyclic Saligenyl Phosphotriesters of 2', 3'-Dideoxy-2', 3'-dideoxythymidine (d4T) - A New Pro-Nucleotide Approach," <u>Bioorg. Med. Chem. Lett.</u> 7: 99-104 (1997)
BJ	Meyer, et al., "2"-O'-Acyl-6-thioinosine Cyclic 3', 5'-Phosphates as Prodrugs of Thioinosinic Acid," <u>J. Med. Chem.</u> 22: 811-815 (1979)
BK	Neldlein, et al., "Mild Preparation of 1-Benzoyloxyiminoalkylphosphonic Dichlorides: Application to the Synthesis of Cyclic Phosphonic Diesters and Cyclic Monoester Amides," <u>Heterocycles</u> 35: 1185-1203 (1993)

EXAMINER:

Examiner

DATE CONSIDERED:

7/9/02

EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant

FORM PTO-1449 LIST OF PATENTS AND OTHER ITEMS FOR APPLICANT'S INFORMATION DISCLOSURE STATEMENT (Use several sheets if necessary)	ATTY. DOCKET NO. 30727.001 IP1	SERIAL NO. 09/518,501
	APPLICANT: METABASIS THERAPEUTICS, INC.	
	FILING DATE: March 5, 1999	GROUP: 1614

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, etc.)		
BL	Nifant'ev, et al., "1,3,2, - Diazaphosphorinanes", <u>Zh. Obshch. Khim.</u> , Vol. 49, No. 1, 1979, Pages 53-61.	
BM	Nifant'ev, et al., "Synthesis and Structure of Some Stable Phospholane-Phospholanes," <u>Phos. Sulfur & Silicon</u> 113, 1-13 (1996)	
BN	Predvoditelev D. , et al., "Glycero-2-hydroxymethylene phosphates" <u>Journal of Organic Chemistry of the USSR (English Translation</u> 13:1489-1492 (1977))	
BO	Predvoditelev, D. et al., "Synthesis of lipids and their models on the basis of glycerol alkylene phosphites. V. Cyclic phosphatidylglycerol and phosphatidylhydroxyhomocholine" <u>Journal of Organic Chemistry of the USSR (English Translation</u> 17:1156-1165 (1981)	
BP	Shaw & Cundy, "Biological Screens of PMEA Prodrugs," <u>Pharm. Res.</u> 10 (Suppl) S-294 (1993)	
BQ	Shih, et al., "Preparation and Structures of 2-Dimethylamino-4-phenyl-1,3,2-dioxaphosphorinane-2-oxides," <u>Bull. Inst. Chem. Acad. Sin.</u> , 41: 9-16 (1994)	
BR	Starrett, et al., "Synthesis, Oral Bioavailability Determination, and <i>in Vitro</i> Evaluation of Prodrugs of the Antiviral Agent 9-[2-(Phosphonomethoxy)-ethyl]adenine (PMEA)," <u>J. Med. Chem.</u> 37: 1857-1864 (1994)	
BS	Yamanaka, et al., "Metabolic Studies on BMS-200475, a New Antiviral Compound Active against Hepatitis B Virus," <u>Antimicrob. Agents Chemoth.</u> 43, 190-193 (1999)	
BT	Zon, et al., "4 Cyclophosphamide Analogues," <u>Prog. Med. Chem.</u> 19: 205-246 (1982)	

EXAMINER: Examiner: <i>[Signature]</i>	DATE CONSIDERED: 7/9/02
EXAMINER: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include a copy of this form with next communication to applicant	



type a plus sign (+) inside this box → +
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number

PTO/SB/08A (08-05)
Approved for use through 10/31/2002. OMB 0351-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Substitution for form 1449A/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)		Application Number	09/518,501
		Filing Date	March 3, 2000
		First Named Inventor	Erion et al.
		Group Art Unit	1624
		Examiner Name	McKenzle, T.
		Attorney Docket Number	45189.00013.RCE (CIP1)
Sheet	1	of	1

RECEIVED
DEC 1 2003
TECH CENTER 1600/2900

U.S. PATENT DOCUMENTS						
Examiner Initials*	Cite No.†	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Referenced Paragraphs or Figures Applicable
		Number	Kind Code‡ (if known)			
J		6,054,587		Reddy et al.	04/25/00	
		6,110,903		Kasibhatla et al.	08/29/00	
		6,284,748		Dang et al.	09/04/01	
		6,294,672		Reddy et al.	09/25/01	
		6,312,662		Erion et al.	11/06/01	
		6,399,782		Kasibhatla et al.	06/04/02	
		6,489,476		Dang et al.	12/03/02	

FOREIGN PATENT DOCUMENTS								
Examiner Initials	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Referenced Paragraphs or Figures Apply	T ⁶
		Office ²	Number ³	Kind Code ⁴ (if known)				

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the Book (book, monograph, journal, article, symposium, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T ⁶

Examiner Signature	<i>Tom McKenzle</i>	Date Considered	4/16/04
--------------------	---------------------	-----------------	---------

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 608. (over the through citation is not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached titles of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 10 if possible. ⁶ Applicant to place a check mark here if English language Translation is attached.

Burdan Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

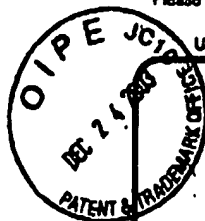
Please type a plus sign (+) inside this box → +

PTO/SB/08A (08-00)

Approved for use through 10/31/2002. OMB 0851-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number



Substitute for form 1449A/PTO			Complete If Known		
INFORMATION DISCLOSURE STATEMENT BY APPLICANT (use as many sheets as necessary)			Application Number	09/518,501	
			Filing Date	March 3, 2000	
			First Named Inventor	Erion et al.	
			Group Art Unit	1624	
			Examiner Name	T. McKenzie	
Sheet	1	of	1	Attorney Docket Number	45188.00013.RCE

U.S. PATENT DOCUMENTS						
Examiner Initials ¹	Cite No. ¹	U.S. Patent Document		Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number	Kind Code ² (if known)			

FOREIGN PATENT DOCUMENTS								
Examiner Initials ¹	Cite No. ¹	Foreign Patent Document			Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T ⁴
		Office ³	Number ³	Kind Code ² (if known)				

NON PATENT LITERATURE DOCUMENTS			
Examiner Initials ¹	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ⁴
a		FARQUHAR et al., "Synthesis and Antitumor Evaluation of Bis[pivaloyloxy)methyl] 2'-Deoxy-5-fluorouridine 5'-Monophosphate (FdUMP): A Strategy to Introduce Nucleotides into Cells," <u>J. Med. Chem.</u> , 37:3902-3909 (1994).	
a		LEFEBVRE, et al., Mononucleotide Phosphotriester Derivatives with S-Acyl-2-thioethyl Bioreversible Phosphate-Protecting Groups: Intracellular Delivery of 3'-Azido-2',3'-dideoxythymidine 5'-Monophosphate," <u>J. Med. Chem.</u> , 38:3941-3950 (1995).	

Examiner Signature	<i>T. McKenzie</i>	Date Considered	4/16/04
--------------------	--------------------	-----------------	---------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation is not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type or plus sign (+) inside this box → +

PTO/SB-08A (08-09)

Approved for use through 10/31/2003. OMB 0831-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number



Substitute for form 1449A/PTO

Complete if known

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 1 of 3

Application Number 09/518,501
Filing Date March 3, 2000
First Named Inventor Erlon et al.
Group Art Unit 1624
Examiner Name T. McKenzie
Attorney Doctet Number 032465.00013.RCE (CIP1)

U.S. PATENT DOCUMENTS

Examiner Initials*	Cite No.*	U.S. Patent Document Number	Kind Code* (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Page, Column, Line, Where Relevant Paragraph or Reference Figure Appears

FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No.*	Foreign Patent Document Office*	Number*	Kind Code* (if known)	Name of Patentee or Applicant of Cited Document	Date of Publication of Cited Document MM-DD-YYYY	Page, Column, Line, Where Relevant Paragraph or Reference Figure Appears	T*

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No.*	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, series, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T*
		Beaucage and Iyer, "The Synthesis of Modified Oligonucleotides by the Phosphoramidite Approach and Their Applications," <u>Tetrahedron</u> , 49(28):6123-6194 (1993).	
		Borch and Millard, "The Mechanism of Activation of 4-Hydroxycyclophosphamide," <u>J. Med. Chem.</u> , 30:427-431 (1987).	
		Cooper et al., "Use of Carbohydrate Derivatives for Studies of Phosphorus Stereo-chemistry. Part II. Synthesis and Configurational Assignments of 1,3,2-Oxathiaphosphorinan-2-ones and 1,3,2-Dioxaphosphorinan-2-thiones," <u>J. Chem. Soc., Perk. Trans. 1</u> , (10):1049-1052 (1974).	
		De Clercq et al., "A Novel Selective Broad-spectrum Anti-DNA Virus Agent," <u>Nature</u> , 323:464-467 (1986).	
		Farquhar et al., "Synthesis and Antitumor Evaluation of Bis[(pivaloyloxy)methyl] 2'-Deoxy-5-fluorouridine 5'-Monophosphate (FdUMP): A Strategy to Introduce Nucleotides into Cells," <u>J. Med. Chem.</u> , 37:3902-3909 (1994).	

Examiner Signature

Date Considered

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 600. Dropping through citation is not in conformance and not considered. Include copy of this form with next communication to applicant.

1 Unique citation designation number. 2 See attached kinds of U.S. Patent Documents. 3 Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). 4 For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. 5 Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. 6 Applicant is to place a check mark here if English language Translation is attached.

Burdan Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

Please type a plus sign (+) inside this box → +

PTO/SB/08A (09-09)

Approved for use through 10/31/2002. OMB 0351-0031
U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it carries a valid OMB control number

Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Complete If Known

Application Number	09/518,501
Filing Date	March 3, 2000
First Named Inventor	Erlan et al.
Group Art Unit	1824
Examiner Name	T. McKenzie
Attorney Docket Number	032485.00013.RCE (CIP1)

Sheet 2 of 3

NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No.	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	+
		Friis and Bundgaard, "Prodrugs of Phosphates and Phosphonates: Novel Lipophilic α -acyloxyalkyl Ester Derivatives of Phosphate- or Phosphonate Containing Drugs Masking the Negative Charges of these Groups," <i>Euro. J. Pharm. Sci.</i> , 4:49-59 (1996).	
		Harada et al., "Resolution of 1,3-alkanediols Via Chiral Spiroketal Derived from α -Menthone," <i>Tetrahedron</i> , 28(41):4843-4846 (1987).	
		Khorana et al., "Cyclic Phosphates. III. Some General Observations on the Formation and Properties of Five-, Six- and Seven-membered Cyclic Phosphate Esters," <i>JACS</i> , 79:430-436 (1957).	
		Korba et al., "Liver-targeted Antiviral Nucleosides: Enhanced Antiviral Activity of Phosphatidyl-dideoxyguanosine Versus Dideoxyguanosine in Woodchuck Hepatitis Virus Infection <i>In Vivo</i> ," <i>Hepatology</i> , 23(5):958-963 (1996).	
		Lefebvre et al., "Mononucleoside Phosphotriester Derivatives with S-acyl-2-thioethyl Bioreversible Phosphate-protecting Groups: Intracellular Delivery of 3'-azido-2',3'-dideoxythymidine 5'-monophosphate," <i>J. Med. Chem.</i> , 38:3941-3950 (1995).	
		Ludeman et al., "Synthesis and Antitumor Activity of Cyclophosphamide Analogues. 4. Preparation, Kinetic Studies, and Anticancer Screening of "Phenylketophosphamide" and Similar Compounds Related to the Cyclophosphamide Metabolite Aldophosphamide," <i>J. Med. Chem.</i> , 29:716-727 (1986).	
		McGuigan et al., "Intracellular Delivery of Bioactive AZT Nucleotides by Aryl Phosphate Derivatives of AZT," <i>J. Med. Chem.</i> , 36:1048-1052 (1993).	
		Mosbo and Verkade, "Dipole Moment, Nuclear Magnetic Resonance, and Infrared Studies of Phosphorus Configurations and Equilibria in 2-R-2-Oxo-1,3,2-dioxaphosphorinanes," <i>J. Org. Chem.</i> , 42(9):1549-1555 (1977).	
		Nakayama and Thompson, "A Highly Enantioselective Synthesis of Phosphate Triesters," <i>J. Am. Chem. Soc.</i> , 112:6936-3942 (1990).	
		Ramachandran et al., "Efficient General Synthesis of 1,2- and 1,3-diols in High Enantiomeric Excess via the Intramolecular Asymmetric Reduction of the Corresponding Ketoalkyl Diisopinocampheylborinate Intermediates," <i>Tetrahedron</i> , 38(3):761-764 (1997).	

Examiner Signature

Date Considered

* EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 809. Draw line through citation is not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 10 if possible. ⁶ Applicant is to place a check mark here if English language Translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

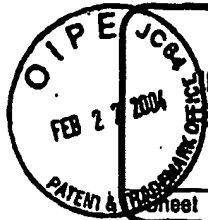
Please type a plus sign (+) inside this box → +

PTO/SB/08A (08-05)

Approved for use through 10/31/2002. OMB 0851-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it contains a valid OMB control number



Substitute for form 1449A/PTO

INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary)

Sheet 3 of 3

Complete If Known

Application Number	09/518,501
Filing Date	March 3, 2000
First Named Inventor	Erion et al.
Group Art Unit	1624
Examiner Name	T. McKenzie
Attorney Docket Number	032465.00013.RCE (CIP1)

NON PATENT LITERATURE DOCUMENTS

Examiner Initials	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	T ²
JK		Starrett, Jr. et al., "Synthesis, Oral Bioavailability Determination, and <i>in Vitro</i> Evaluation of Prodrugs of the Antiviral Agent 9-[2-(Phosphonomethoxy)ethyl]adenine (PMEA)," <u>J. Med. Chem.</u> , 37:1857-1864 (1994).	
		Thomson et al., "Synthesis, Bioactivation and Anti-HIV Activity of the Bis(4-acyloxybenzyl) and Mono(4-acyloxybenzyl) Esters of the 5'-monophosphate of AZT," <u>J. Chem. Soc., Perk. Trans. I</u> , (11):1239-1245 (1993).	
		Weber and Waxman, "Activation of the Anti-cancer Drug Ifosfamide by Rat Liver Microsomal P450 Enzymes," <u>Biochem. Pharm.</u> , 45(8):1685-1694 (1993).	
		Zon et al., "NMR Spectroscopic Studies of Intermediary Metabolites of Cyclophosphamide. A Comprehensive Kinetic Analysis of the Interconversion of <i>cis</i> - and <i>trans</i> -4-Hydroxycyclophosphamide with Aldophosphamide and Concomitant Partitioning of Aldophosphamide Between Irreversible Fragmentation and Reversible Conjugation Pathways," <u>J. Med. Chem.</u> 27:466-485 (1984).	

Examiner Signature	<i>T. McKenzie</i>	Date Considered	4/16/07
-----------------------	--------------------	--------------------	---------

*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation is not in conformance and not considered. Include copy of this form with next communication to applicant.

¹ Unique citation designation number. ² See attached Kinds of U.S. Patent Documents. ³ Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). ⁴ For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. ⁵ Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST. 16 if possible. ⁶ Applicant is to place a check mark here if English language translation is attached.

Burden Hour Statement: This form is estimated to take 2.0 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

FORM PTO-1449

INFORMATION DISCLOSURE STATEMENT

ATTY. DOCKET NO.
2358.0010002/RWE/CJWAPPLICATION NO.
09/518,501FIRST NAMED INVENTOR
Erion *et al.*FILING DATE
March 3, 2000ART UNIT
1624

U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
gr	AA1	3,404,178	10/01/1968	Roy, C.H.			10/07/1965
	AB1	4,621,077	11/04/1986	Rosini <i>et al.</i>			06/08/1984
	AC1	4,659,825	04/21/1987	Holy <i>et al.</i>			01/06/1984
	AD1	4,705,651	11/10/1987	Staibano			10/11/1985
	AE1	4,724,232	02/09/1988	Rideout <i>et al.</i>			09/17/1985
	AF1	4,724,233	02/09/1988	De Clercq <i>et al.</i>			04/21/1986
	AG1	4,777,163	10/11/1988	Bosles <i>et al.</i>			07/24/1987
	AH1	4,808,716	02/28/1989	Holy <i>et al.</i>			04/25/1986
	AI1	4,861,759	08/29/1989	Mitsuya <i>et al.</i>			08/11/1987
	AJ1	4,879,277	11/07/1989	Mitsuya <i>et al.</i>			08/11/1987
✓	AK1	4,882,142	11/21/1989	Simon <i>et al.</i>			12/19/1988

FOREIGN PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AL						Yes No
	AM						Yes No
	AN						Yes No
	AO						Yes No
	AP						Yes No

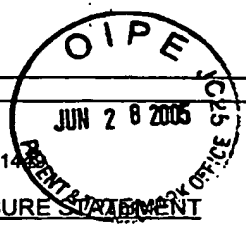
OTHER (Including Author, Title, Date, Pertinent Pages, etc.)

	AR		
	AS		
	AT		

EXAMINER

DATE CONSIDERED

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



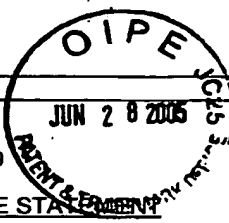
FORM PTO-147		Page 2 of 3	
INFORMATION DISCLOSURE STATEMENT		ATTY. DOCKET NO. 2358.0010002/RWE/CJW	APPLICATION NO. 09/518,501
		FIRST NAMED INVENTOR Erion <i>et al.</i>	
		FILING DATE March 3, 2000	ART UNIT 1624

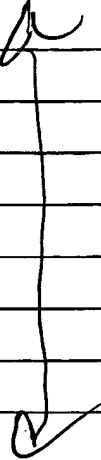
U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
JL	AA2	4,898,724	02/06/1990	Simon <i>et al.</i>			05/14/1987
	AB2	4,939,130	07/03/1990	Jaeggi <i>et al.</i>			02/27/1989
	AC2	5,034,394	07/23/1991	Daluge			12/22/1989
	AD2	5,047,533	09/10/1991	Reist <i>et al.</i>			01/22/1990
	AE2	5,089,500	02/18/1992	Daluge			05/08/1991
	AF2	5,153,183	10/06/1992	Kawabe <i>et al.</i>			05/06/1991
	AG2	5,210,085	05/11/1993	Liotta <i>et al.</i>			02/22/1991
	AH2	5,240,946	08/31/1993	Kinney <i>et al.</i>			04/29/1992
	AI2	5,246,937	09/21/1993	Hamden <i>et al.</i>			01/22/1992
	AJ2	5,366,965	11/22/1994	Strein			01/29/1993
	AK2	5,480,875	01/02/1996	Isomura <i>et al.</i>			371 Date: 12/21/1994

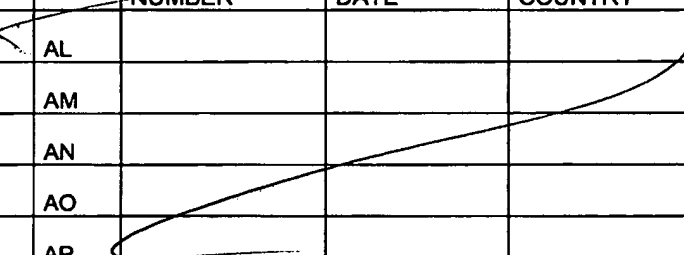
FOREIGN PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AL						Yes No
	AM						Yes No
	AN						Yes No
	AO						Yes No
	AP						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)			
AR			
AS			
AT			

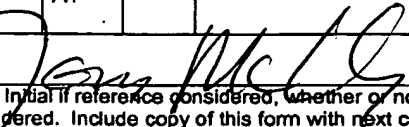
EXAMINER <i>Don McKee</i>	DATE CONSIDERED <i>7/1/01</i>
EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.	

		Page 3 of 3	
FORM PTO-1449		ATTY. DOCKET NO. 2358.0010002/RWE/CJW	APPLICATION NO. 09/518,501
INFORMATION DISCLOSURE STATEMENT		FIRST NAMED INVENTOR Erion <i>et al.</i>	
		FILING DATE March 3, 2000	ART UNIT 1624

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB-CLASS	FILING DATE
	AA3	5,532,225	07/02/1996	Reist <i>et al.</i>			07/31/1992
	AB3	5,583,122	12/10/1996	Benedict <i>et al.</i>			12/06/1985
	AC3	5,663,159	09/02/1997	Starrett, Jr. <i>et al.</i>			10/11/1994
	AD3	5,681,590	10/28/1997	Bechard <i>et al.</i>			371 Date: 07/26/1995
	AE3	5,721,219	02/24/1998	Ingall <i>et al.</i>			08/09/1995
	AF3	5,814,639	09/29/1998	Liotta <i>et al.</i>			02/16/1993
	AG3	5,840,716	11/24/1998	Ubasawa <i>et al.</i>			01/17/1997
	AH3	5,869,467	02/09/1999	Holy <i>et al.</i>			03/28/1995
	AI3	5,914,331	06/22/1999	Liotta <i>et al.</i>			06/07/1995
		AJ					
	AK						

FOREIGN PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB-CLASS	TRANSLATION
	AL						Yes No
	AM						Yes No
	AN						Yes No
	AO						Yes No
	AP						Yes No

OTHER (Including Author, Title, Date, Pertinent Pages, etc.)			
	AR		
	AS		
	AT		

EXAMINER 	DATE CONSIDERED 7/1/05
<small>EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.</small>	